

System Requirements and Performance (Dollars are in millions except as noted.)								
<b>Chicago Hub Network</b>	<b>90</b>	<b>110</b>	<b>125F</b>	<b>125E</b>	<b>150F</b>	<b>150E</b>	<b>New HSR</b>	<b>Maglev</b>
<b><i>Physical, production, and traffic factors (traffic data is for the year 2020)</i></b>								
Route-miles	662	662	662	662	662	662	607	646
Trip-time, hours, Detroit-Milwaukee	5.3	4.6	4.4	4.3	4.2	4.2	3.4	2.1
Average train speed (mph)	70	80	84	86	89	88	116	177
Average fare per passenger-mile (dollars)	0.145	0.166	0.181	0.181	0.188	0.188	0.230	0.309
Trains per day in each direction	12	13	13	14	14	14	13	46
Passengers, Millions of Trips (2020)	5.9	6.6	6.6	6.7	6.9	6.9	8.1	9.4
Passenger-Miles, Millions (2020)	1,142	1,313	1,305	1,329	1,375	1,380	1,680	1,900
Average trip length (miles)	193	197	198	198	200	200	207	203
Average trip length as % of route length	29%	30%	30%	30%	30%	30%	34%	31%
HSGT traffic density per route-mile (millions of passenger-miles per route-mile)	1.7	2.0	2.0	2.0	2.1	2.1	2.8	2.9
Percent of air traffic diverted	12.7%	16.4%	16.9%	17.4%	18.5%	18.6%	28.1%	36.7%
Percent of intercity auto traffic diverted	3.7%	4.2%	4.1%	4.1%	4.3%	4.3%	4.4%	4.1%
Percent of HSGT traffic by source:								
Diverted from air	27%	30%	31%	31%	32%	32%	42%	49%
Diverted from auto	41%	40%	39%	39%	38%	38%	33%	28%
Diverted from conventional rail	24%	22%	22%	21%	21%	21%	18%	15%
Diverted from bus	1%	1%	1%	1%	1%	1%	0%	0%
Induced	8%	8%	8%	8%	8%	8%	7%	7%
<b><i>Operating efficiency factors, 2020</i></b>								
Train-miles, millions	8.5	9.5	9.5	10.0	10.0	10.0	11.2	23.8
Passenger-miles per train mile	135	138	137	133	137	138	150	80
Seat-miles, millions	2,235	2,517	2,518	2,647	2,645	2,643	3,172	3,571
Load factor	51%	52%	52%	50%	52%	52%	53%	53%
Gross ton-miles, millions	3,065	3,299	3,110	3,168	3,166	3,064	4,378	2,143
Passenger-miles per gross ton-mile	0.37	0.40	0.42	0.42	0.43	0.45	0.38	0.89
Train-hours, millions	0.12	0.12	0.11	0.12	0.11	0.11	0.10	0.13
Passenger-miles per train hour	9,457	11,033	11,491	11,374	12,218	12,129	17,487	14,141
Operating ratio	75%	63%	59%	65%	56%	62%	49%	37%
<b><i>Operating results for 2020</i></b>								
Revenues:								
Passenger transportation revenue	\$166	\$217	\$236	\$240	\$258	\$259	\$386	\$587
Income from ancillary activities	\$8	\$10	\$10	\$10	\$10	\$10	\$11	\$13
System revenues	\$174	\$227	\$246	\$250	\$268	\$269	\$397	\$599
<i>Percent of system revenues from ancillary activities</i>	5%	4%	4%	4%	4%	4%	3%	2%
Operating and maintenance expenses:								
Maintenance of way	\$11	\$12	\$14	\$25	\$15	\$28	\$30	\$29
Maintenance of equipment	\$16	\$18	\$18	\$16	\$18	\$17	\$25	\$16
Transportation	\$29	\$32	\$32	\$37	\$32	\$37	\$39	\$63
Passenger traffic and services	\$36	\$40	\$40	\$41	\$42	\$42	\$49	\$60
General and administrative	\$33	\$36	\$37	\$37	\$38	\$38	\$47	\$47
Total O&M expense	\$125	\$138	\$140	\$157	\$146	\$161	\$191	\$215
<i>Per passenger-mile (dollars):</i>								
Maintenance of way	\$0.009	\$0.009	\$0.011	\$0.019	\$0.011	\$0.020	\$0.018	\$0.015
Maintenance of equipment	\$0.014	\$0.013	\$0.013	\$0.012	\$0.013	\$0.012	\$0.015	\$0.008
Transportation	\$0.025	\$0.025	\$0.024	\$0.028	\$0.024	\$0.027	\$0.023	\$0.033
Passenger traffic and services	\$0.032	\$0.031	\$0.031	\$0.031	\$0.030	\$0.030	\$0.029	\$0.032
General and administrative	\$0.029	\$0.028	\$0.028	\$0.028	\$0.028	\$0.028	\$0.028	\$0.025
Total O&M expense	\$0.109	\$0.105	\$0.107	\$0.118	\$0.106	\$0.117	\$0.114	\$0.113
Operating surplus	\$50	\$89	\$106	\$93	\$123	\$108	\$206	\$384
<i>Operating surplus per passenger-mile (dollars)</i>	\$0.044	\$0.068	\$0.081	\$0.070	\$0.089	\$0.078	\$0.123	\$0.202
Year showing first operating surplus	Year 2000	Year 2000	Year 2000	Year 2000	Year 2000	Year 2000	Year 2000	Year 2000

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<b>Life-Cycle Measures</b> (All amounts are present values, as of the year 2000, of cash inflows/outflows between 2000 and 2040. )								
Revenues:								
Passenger Transportation Revenues	\$1,331	\$1,754	\$1,899	\$1,935	\$2,086	\$2,093	\$3,128	\$4,859
Income from Ancillary Activities	\$65	\$76	\$77	\$79	\$82	\$82	\$89	\$103
System Revenues	\$1,396	\$1,831	\$1,977	\$2,013	\$2,167	\$2,175	\$3,217	\$4,962
Less: Total O&M expenses	\$1,041	\$1,167	\$1,179	\$1,333	\$1,237	\$1,394	\$1,663	\$1,904
Operating surplus	\$355	\$664	\$798	\$680	\$931	\$781	\$1,554	\$3,058
Less: Continuing investments	\$98	\$104	\$90	\$97	\$95	\$91	\$182	\$85
Surplus after continuing investments	\$257	\$560	\$708	\$584	\$835	\$690	\$1,371	\$2,974
Initial investment:								
Initial vehicle investment	\$360	\$452	\$424	\$424	\$424	\$452	\$730	\$578
Initial infrastructure investment	\$690	\$1,020	\$2,000	\$3,190	\$3,269	\$4,670	\$11,539	\$17,192
Initial investment for ancillary activities	\$13	\$14	\$14	\$15	\$15	\$15	\$15	\$17
Initial investment, Total	\$1,062	\$1,487	\$2,438	\$3,628	\$3,708	\$5,137	\$12,285	\$17,787
Percent of total initial investment pertaining to--								
Vehicles	34%	30%	17%	12%	11%	9%	6%	3%
Infrastructure	65%	69%	82%	88%	88%	91%	94%	97%
Ancillary activities	1%	1%	1%	0%	0%	0%	0%	0%
Total initial investment per route-mile	\$1.6	\$2.2	\$3.7	\$5.5	\$5.6	\$7.8	\$20.3	\$27.5
Portion of initial investment that is <u>not</u> covered by surplus after continuing investments	\$805	\$927	\$1,730	\$3,045	\$2,872	\$4,448	\$10,913	\$14,813
Percentage of initial investment covered by surplus after continuing investments	24%	38%	29%	16%	23%	13%	11%	17%
<b>Comparison of Benefits and Costs; Assessment of Partnership Potential</b>								
<b>Surplus after continuing investments</b>	<b>\$257</b>	<b>\$560</b>	<b>\$708</b>	<b>\$584</b>	<b>\$835</b>	<b>\$690</b>	<b>\$1,371</b>	<b>\$2,974</b>
Total benefits:								
Benefits to HSGT users:								
System revenues	\$1,396	\$1,831	\$1,977	\$2,013	\$2,167	\$2,175	\$3,217	\$4,962
Users' consumer surplus	\$1,888	\$2,363	\$2,392	\$2,454	\$2,594	\$2,606	\$3,478	\$4,491
Total benefits to HSGT users	\$3,283	\$4,194	\$4,368	\$4,468	\$4,761	\$4,781	\$6,694	\$9,453
Benefits to the public at large:								
Airport congestion delay savings								
Operation delays	\$511	\$623	\$642	\$654	\$691	\$694	\$907	\$1,225
Passenger delays	\$951	\$1,158	\$1,194	\$1,217	\$1,285	\$1,290	\$1,671	\$2,254
Total airport congestion delay savings	\$1,462	\$1,780	\$1,836	\$1,871	\$1,976	\$1,984	\$2,578	\$3,480
Highway delay savings	\$611	\$692	\$671	\$686	\$688	\$690	\$688	\$717
Emission savings	\$39	\$115	\$111	\$152	\$80	\$165	\$186	\$175
Total benefits to the public at large	\$2,111	\$2,587	\$2,618	\$2,709	\$2,745	\$2,838	\$3,452	\$4,371
<b>Total benefits</b>	<b>\$5,395</b>	<b>\$6,781</b>	<b>\$6,986</b>	<b>\$7,176</b>	<b>\$7,505</b>	<b>\$7,619</b>	<b>\$10,146</b>	<b>\$13,824</b>
Total costs:								
Initial investment	\$1,062	\$1,487	\$2,438	\$3,628	\$3,708	\$5,137	\$12,285	\$17,787
O&M expense	\$1,041	\$1,167	\$1,179	\$1,333	\$1,237	\$1,394	\$1,663	\$1,904
Continuing investments	\$98	\$104	\$90	\$97	\$95	\$91	\$182	\$85
<b>Total costs</b>	<b>\$2,201</b>	<b>\$2,758</b>	<b>\$3,706</b>	<b>\$5,058</b>	<b>\$5,039</b>	<b>\$6,622</b>	<b>\$14,130</b>	<b>\$19,775</b>
Incidence of total costs:								
Costs borne by users	\$1,396	\$1,831	\$1,977	\$2,013	\$2,167	\$2,175	\$3,217	\$4,962
Publicly-borne costs	\$805	\$927	\$1,730	\$3,045	\$2,872	\$4,448	\$10,913	\$14,813

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<b>Total benefits less total costs</b>	<b>\$3,194</b>	<b>\$4,023</b>	<b>\$3,280</b>	<b>\$2,118</b>	<b>\$2,466</b>	<b>\$997</b>	<b>(\$3,984)</b>	<b>(\$5,951)</b>
Benefits to HSGT users less costs borne by users	\$1,888	\$2,363	\$2,392	\$2,454	\$2,594	\$2,606	\$3,478	\$4,491
Benefits to the public at large less publicly-borne costs	\$1,306	\$1,660	\$888	(\$336)	(\$128)	(\$1,609)	(\$7,461)	(\$10,442)
<b>Ratio of total benefits to total costs</b>	<b>2.45</b>	<b>2.46</b>	<b>1.88</b>	<b>1.42</b>	<b>1.49</b>	<b>1.15</b>	<b>0.72</b>	<b>0.70</b>
Ratio of benefits to HSGT users, to costs borne by users	2.35	2.29	2.21	2.22	2.20	2.20	2.08	1.90
Ratio of benefits to the public at large, to publicly-borne costs	2.62	2.79	1.51	0.89	0.96	0.64	0.32	0.30
<b>Does this case meet the threshold tests for "partnership potential"?</b>	YES	YES	YES	YES	YES	YES	NO	NO